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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,786	09/17/2003	Shigeru Kuramoto	242926US0	2975
22850	7590	06/19/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER ROE, JESSEE RANDALL	
			ART UNIT 1742	PAPER NUMBER
			NOTIFICATION DATE 06/19/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/663,786	KURAMOTO ET AL.	
	Examiner	Art Unit	
	Jessee Roe	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11 and 13-24 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>30 March 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

Claims 1-5, 7-11, and 13-24 are pending wherein claims 7-10 are withdrawn from consideration; claims 6 and 12 are canceled; and claims 19-24 are new. The Examiner notes that instant claim 1 appears to have an improper identifier of (Currently Amended). However, there appears to be no amendment to instant claim 1.

Status of Previous Rejections

The previous rejection of claims 1-5 and 11 under 35 U.S.C. 103(a) as being unpatentable over Ahmed (US 5,871,595) is withdrawn in view of the Applicant's arguments. The previous rejections of claims 1-5 on the grounds of nonstatutory obviousness-type double patenting over claims 1-2, 5-6 and 26 of US Patent No. 6,607,693 is withdrawn in view of the Applicant's arguments.

Claim Objections

Claim 24 is objected to because of the following informalities: "°K" should be replaced by "K". Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not provide adequate

support for the alloy not containing at least one alloying element selected from the group consisting of nickel, cobalt or aluminum.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 11, 13, 15-17; 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bitter et al. (GB 2,190,100).

Claims 1-5, 11, 13 and 15-17 are rejected on the same grounds as stated in the Office Action of 4 December 2006.

In regards to claims 19-21, Bitter et al. (GB '100) disclose wherein the interstitial elements would include oxygen, carbon and nitrogen (pg. 2, lines 1-20).

In regards to claims 22-23, Bitter et al. (GB '100) disclose wherein the titanium alloy would contain between 3 and 28% (atomic percent) of *one or more* of the elements aluminum, chromium, iron, hafnium, cobalt, copper, manganese, molybdenum, nickel, niobium, palladium, silver, silicon, tantalum, vanadium, tungsten, tin, zirconium, beryllium, boron, carbon, oxygen, rare earths and yttrium, which would overlap the range of 0.3 to 1.8 mass percent aluminum (abstract) and not necessarily contain each of nickel, cobalt and aluminum.

In regards to claim 24, With respect to the recited process for producing a

titanium alloy involving solution treatment comprising: heating the raw titanium-alloy material to form beta single phase therein; and quenching the heated raw titanium alloy material; thereby providing a titanium alloy characterized as a beta single phase at 273-313 °K, the Examiner notes that claim 24 is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. Therefore, the claimed process limitations for the titanium alloy would not render the titanium alloy distinct from the titanium alloy of Bitter et al. (GB ‘100).

Claims 1-5, 11 and 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 6,607,693).

Claims 1-5, 11 and 13-18 are rejected on the same grounds as stated in the Office Action of 4 December 2006.

In regards to claims 19-21, Saito et al. ('693) disclose wherein the oxygen, nitrogen and carbon would be interstitial elements (col. 10, line 67 – col. 11, line 15)

In regards to claim 23, Saito et al. ('693) disclose wherein the aluminum would be within 0.3 – 5 weight percent, which overlaps the range of 0.3 – 1.8 weight percent aluminum as in the instant invention.

In regards to claim 24, With respect to the recited process for producing a titanium alloy involving solution treatment comprising: heating the raw titanium-alloy material to form beta single phase therein; and quenching the heated raw titanium alloy material; thereby providing a titanium alloy characterized as a beta single phase at 273-313 °K, the Examiner notes that claim 24 is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. Therefore, the claimed process limitations for the titanium alloy would not render the titanium alloy distinct from the titanium alloy of Saito et al. ('693).

Response to Arguments

Applicant's arguments filed 30 March 2007 have been fully considered but they are not persuasive.

First, the Applicant argues primarily that there is no disclosure or suggestion in Bitter et al. (GB '100) that there is no suggestion for beta single phase titanium alloy stable at room temperature containing a large content of oxygen. The Examiner disagrees. Bitter et al. (GB '100) disclose wherein the titanium alloy would be forged,

cast, or sintered to form an alpha, alpha + beta, or beta type alloy for machine parts (which would at least be at room temperature when not in operation) (pg. 1, lines 5-10).

Second, the Applicant primarily argues that there is no discretion for selecting values from Bitter et al. (GB '100) and Saito et al. ('693) to fulfill the Mo_{eq} relationship with the alloying elements. The Examiner disagrees. With respect to the elemental formula found in claims 1 and 15, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 552 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. *In re Austin, et al.*, 149 USPQ 685, 688. The titanium alloy of Bitter et al. (GB '100) and Saito et al. ('693) with the disclosed compositional ranges are covered by the claimed compositional formula.

Third, the Applicant primarily argues that Saito et al. ('693) disclose that the upper limit of the oxygen content is 0.6 mass percent but there is no concrete example in which the oxygen content is 0.6 mass percent. The Examiner disagrees. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR


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